



Business Process Management Group

A New Approach To Quality

By Keith Harrison-Broninski
July 2005

A New Approach To Quality

Certain business processes—those focused on human involvement—are typically handled better in small organizations than large ones. This is because people know intuitively that they should pay attention to human issues—and when direct control over the entire workplace is available attention can be paid to them relatively easily. However, as organizations grow in size, other issues start to predominate.

For this reason, people who were part of a large company when it was still a small one often bemoan the loss of a culture that they valued. They may declare that as a result their job satisfaction has changed in inverse proportion to their financial status, and say they are only hanging on until they have gained enough stock options to get out.

This benefits no one. Everyone gains more from a job to which they can give their all, wholeheartedly—and the organization gains most of all.

*In this article we look at this problem, identify its causes, and propose a solution via the emerging discipline of **Human Interaction Management**. We show that it is possible for large organizations to maintain a personal approach and values more typical of small organizations. They just need a new approach to quality.*

Jazz is a very democratic musical form. It comes out of a communal experience. We take our respective instruments and collectively create a thing of beauty.
—Max Roach.

In the 1980s, I worked for a forward-thinking software house, Praxis Systems . Praxis was so committed to a modern approach that it became the first UK software house to achieve BS5750 certification (and later ISO 9000). At the time, this meant that each staff member, on commencing any task at all, had to consult a printed Quality Manual, bound in several large volumes, in order to look up and follow the appropriate procedure. Procedure descriptions were lengthy. There were lots of printed forms to fill in and file before, during and after carrying out the work itself. And every few months the company would enter a state of barely concealed panic when the man from the BSI (British Standards Institution—the National Standards Body of the UK) came to call.

Nevertheless, the system worked. By and large, staff members subscribed to the view that by working in this cumbersome way we were delivering products and services of *quality*—that to us, back then, had a plain and simple definition. It meant that what we supplied was *fit for purpose*. Our products and services did what we claimed they would, and what the customer expected. This was unquestionable, because we had stated what our procedures were, and proved that we stuck to them.

Fifteen years down the line, things have changed—almost beyond recognition. In part this is because computer support for business operations has helped to automate procedures, and to alleviate the burden of paperwork—so we don't have to look up “what to do” the whole time in order to be sure we're getting things right. More fundamentally, our understanding of quality *management* has also progressed, to the point where some organizations hardly need a Quality Manual at all, since quality assurance and control are built directly into core operational

procedures. Yet this is not all. Even deeper changes have taken place in the quality world, to the point that most people working in the field, if pressed to define quality now, would say that the old definition in terms of *fitness for purpose* no longer has much practical relevance.

Unless you are fortunate enough to be a monopoly supplier in some way, it is not enough that your product or service does what it says on the box. If you are to stay in business, in some way at least, you must provide something better (or at least cheaper) than anyone else. Since your competitors are in the same boat, the target is always moving, and you must either continuously get better, or drop out of the race for good.

The only way to achieve this ideal of continuous improvement is to measure as many as possible of the factors that impact delivery of your products and services. This means getting to grips with your business processes. The International Organization for Standardization (ISO) recognizes this in the latest revision of their quality standards (ISO 9001:2000, *Quality Management System Requirements*). ISO 9001:2000 requires an organization to:

- Identify the various processes needed to consistently and systematically deliver high-quality products and services to its customers, that meet or exceed customer expectations
- Document and implement a quality system that ensures these processes are not only maintained but can be continuously improved.

In other words, ISO 9001:2000 insists not only that key processes are properly documented and adhered to, but also that they are *measurable for improvement*. When implemented effectively, the standard enables an organization to both deliver a quality service/product and to create a mechanism for continuous improvement of the organization. ISO 9001:2000 is broken into the following five clauses, which address the major process areas within an organization:

- *Quality Management Systems*—an organization must establish, document, implement, and maintain a Quality Management System and continuously improve its effectiveness. Such a system must include defined quality policies and procedures to meet the organization's established quality objectives.
- *Management Responsibility*—Top management must provide evidence of its commitment to Quality Management System development, implementation, and continual improvement.
- *Resource Management*—The organization must determine and provide the resources necessary to effectively implement its Quality Management System.
- *Product Realization*—An organization must address all the functions and processes necessary to design, develop, and deliver products or services to its customers.

- *Measurement, Analysis, and Improvement*—The organization shall plan and implement the necessary monitoring, measurement, analysis, and improvement processes to support the consistent and reliable delivery of quality products and services to its customers. Such measurements and data must be identified and continuously monitored for effectiveness.

So, a term (*quality*) that originally represented adherence to a fixed set of procedures has come to represent something almost the opposite—continual process improvement. Effective management of process change is now at the heart of any modern quality system.

So, what techniques are currently applied to manage this new approach to quality management? Perhaps the most popular at the moment is Six Sigma—a methodology for incremental process improvement. Six Sigma uses statistical analysis of process data to measure and improve a company's operational performance by identifying and eliminating defects in manufacturing and service-related processes.

Six Sigma is all about consistency. To achieve Six Sigma quality, a process must produce no more than 3.4 defects per million *opportunities*, where an opportunity is defined as a chance for nonconformance, or not meeting the required specifications. The ultimate aim is flawless performance—*every time*. While you can use Six Sigma to improve processes in a more general way, this is not the emphasis. Rather, primary importance is placed on reducing operational error.

“Often, our inside-out view of the business is based on average or mean-based measures of our recent past. Customers don't judge us on averages, they feel the variance in each transaction, each product we ship. Six Sigma focuses first on reducing process variation and then on improving the process capability.

Customers value consistent, predictable business processes that deliver world-class levels of quality. This is what Six Sigma strives to produce.”ⁱ

Six Sigma is typical of a general movement in the quality world, away from the radical techniques advocated by the Business Process Reengineering movement of the 1990s that were not, in general, successful. Despite the power of the ideas set out by Hammer and Champy,ⁱⁱ and the success stories described in the original literature, many companies' experience with Business Process Reengineering was nothing short of disastrous. True figures are hard to come by for commercial reasons, but the standard view is that between 50% and 80% of reengineering projects failed in their original objectives—and many of the others may have achieved their original aims but caused lasting harm to the organization. This dealt the world of business process analysis and support a blow from which it is only now starting to recover. Unfortunately, Business Process Management still suffers from the association with reengineering.

Hence, the current trend is toward a safer, incremental approach. Six Sigma, in particular, is seen by some as the modern approach to

Total Quality Management (TQM), with a more structured description of management that provides a greater chance of success.

So, why did business process reengineering fail? The underlying principle was to look first and only at current customer requirements. Once these had been determined, you could create new processes specifically to support them, automated as far as possible, and dispense with everything else—including as many unnecessary *people* as possible (downsizing). What you ended up with, if you were lucky, were some very efficient processes—that were almost impossible to change. How could you adapt to new market conditions, or grow your business, if you had dispensed with all your staff except the bare minimum required to keep things ticking along in one inflexible way?

Not only did none of the remaining people have the time available to make changes, but the industry knowledge and business skills picked up over the years were all gone. Most people at a senior level—middle management in particular—had been judged extraneous to day-to-day requirements and made redundant. Hence it was impossible to do anything differently, since no one left around had much idea how to go about making changes. Many companies downsized only to end up having to take on their old staff all over again, but this time on a freelance basis, as highly paid consultants who understandably now felt little or no loyalty to their old employers.

The problems were all to do with people. Reengineering made no allowance for the varied contributions that staff with different knowledge and abilities make to a company—simply by being there. At the time, there was little understanding of what are now called *intangibles*. As Verna Allee writes:

“Mastering value creation in the knowledge economy requires appreciating the pivotal role of intangibles in the business model and a thorough understanding of network dynamics. ...

Intangibles are at the heart of all human activity, especially socio-economic activity ...

[There] are serious attempts to develop new indexes, equations, measures, and analytical approaches for calculating knowledge assets and for understanding intangible value creation.”ⁱⁱⁱ

So, since intangibles are now in focus, is the time right for a re-evaluation of reengineering? Well, not really, at least not in its original form. Few people still think that you can shape a company directly around current customer requirements. The lasting contribution of the business process reengineering movement was to show the importance of business processes in and of themselves. Now that most senior executives have a fairly good idea of what their high-level processes are, they are starting to manage their companies in process terms, and they recognize the true nature of *functional silos* (departments or teams that handle a specific function—a type of activity carried out on behalf of multiple simultaneous processes).

However, even if we ditch reengineering itself as a developmental stage that is now past, that is no reason to ditch *radical improvement* as a goal of quality management. Moreover, the principles and techniques of **Human Interaction Management** provide the means to *deal with intangibles in process terms*. How can we use an understanding of human-driven activity to dramatically improve business processes? And why should we bother?

The key to answering both these questions is to look again at *indicators*—the metrics used to measure a sound process. Methodologies such as Six Sigma typically pay constant attention to traditional process metrics such as:

- Is the error rate as low as possible?
- Is the process efficient in resource usage?
- Is the cycle time as short as possible?
- And so on.

Such *hard* factors are undoubtedly vital, because they have a direct and measurable effect on an organization's bottom line. However, many quality-driven organizations have now reached the point where there is little improvement to be made in these areas—or little improvement that affects the price or customer perception of their products and services.

So, where does such an organization look for the continual process improvement necessary for business competitiveness, and mandated by ISO 9001:2000? Are there *soft* factors too—subtler aspects of quality, that turn out also to impact the bottom line? And since we cannot improve anything without measuring it, what sort of metrics should we be gathering in order to understand these soft factors?

General models do exist by which an organization as a whole can be measured, and some of these include a process aspect. For example, two widely used approaches are:

- *European Excellence Model*. The *EFQM Excellence Model*, a non-prescriptive framework based on nine criteria, can be used to assess an organization's progress toward excellence. "The Model recognizes there are many approaches to achieving sustainable excellence in all aspects of performance. It is based on the premise that Excellent results with respect to Performance, Customers, People and Society are achieved through Leadership driving Policy and Strategy, that is delivered through People, Partnerships and Resources and Processes."^{iv}
- *Capability Maturity Model Integration*. This is a staged approach to institutionalizing best practices that extends the original *Capability Maturity Model for Software* to domains including systems engineering, software engineering, Integrated Product and Process Development, and supplier sourcing.^v

Both these methodologies allow some features of organizational performance to be quantified in process terms. What they do not supply is a rounded and generic set of criteria that we can use to *judge an individual process in terms of the humans who operate it*. For instance, the European Excellence Model analyses the process aspect of an organization in the following terms:

“Excellent organizations design, manage and improve processes in order to fully satisfy, and generate increasing value for, customers and other stakeholders.

- Processes are systematically designed and managed
- Processes are improved, as needed, using innovation in order to fully satisfy and generate increasing value for customers and other stakeholders
- Products and Services are designed and developed based on customer needs and expectations
- Products and Services are produced, delivered and serviced
- Customer relationships are managed and enhanced^{vi}

Just as with reengineering, the focus is all on the *immediate deliverables* of the process, whether these are products, services, or a better relationship with the customer. If we are to move beyond the limitation that caused reengineering to fail, we must take a wider view of process, and assess it in more general terms. In particular, we need a set of criteria by which an individual process can be judged according to *how it makes best use of the people involved*.

This broader approach will give us an idea of whether or not a particular process is implemented so as to have lasting value, as well as immediate benefit. If a process is designed to capitalize on what enterprises conventionally state is their chief asset—their employees—then it is more likely stay afloat throughout the storms of continual business change, and to deliver its cargo come what may.

A set of criteria for measuring processes in terms of how people are used is presented in **Table 1: Human-Driven Process Metrics**. Some of the criteria are related to the hard factors mentioned above, while others are softer—which simply means that the impact on the bottom line is indirect. However, the impact on the bottom line is always there, in every case.^{vii}

Moreover, each criterion is generic—applying to both the public and the private sector, profit and non-profit organizations, SMEs and large enterprises, and all industry sectors. Hence all the criteria are relevant to any organization.

For each criterion, we give example indicators that can be tracked, in order to provide metrics that permit process improvement against

the criterion. In some cases, there is the risk that tracking will itself influence the process metrics—for instance, monitoring creative activity can inhibit it, or render it artificial. We are careful to provide indicators that minimize this risk.

Other indicators are possible, and those shown are for illustration purposes only. There may also be other metrics appropriate for measuring the effectiveness of human involvement in a process.

Table 1: Human-Driven Process Metrics

Process Metric	Discussion	Example Indicators
Cross-cutting	Processes should be designed to allow maximum sharing of human resources. This applies not only to direct process participation, but also to indirect re-use of information gathered, lessons learned, customer and market contacts, mechanisms of management, and so on.	Are product development and service skills reused between value streams? Are different products and services being cross-sold to the same customers? How streamlined is process design activity in terms of skill levels and tool usage?
Agility	Process design changes should be made as often as necessary, and implemented as quickly as possible.	Do the same problems recur time after time? How well does a process scale to support increased throughput? What is the decision-to-change time?
Creativity	To foster a learning, innovative culture, it is necessary first to <i>notice</i> and then to <i>act on</i> individuals' responses to the process they are part of, and the suggestions they put forward about it. Only some ideas will be good—nevertheless, even the poor ones should be rewarded if made in the right spirit. Moreover, in most cases a dialectic can be expected (<i>thesis</i> followed by <i>antithesis</i> followed by <i>synthesis</i>)—the process should permit this to take place.	How many ideas have been submitted? Of those submitted, how many have been discussed properly? When the ideas that were implemented are analyzed retrospectively, how many were done in haste and without due consideration?
Flexibility	A process may need to be operated differently to meet the needs of different customers, or to suit the nature and skills of different participants. It is usually possible to include some flexibility in the design, so as to support	Can we identify precisely the inputs, outputs and internal dependencies, in order to determine the requirements placed on process participants? Can the process spawn customized sub-processes to deal with

Process Metric	Discussion	Example Indicators
	<p>some new situations without the process itself having to change. The more generic a particular process is, the less onerous process management becomes. It is something of a trade-off, however, since more customized processes may be more efficient and make better use of specialized skills—a balance must be struck.</p>	<p>specialized situations? Do process participants struggle to cope with the variety of demands placed on them, or customers complain that they are receiving service from unqualified staff? Can the services or products concerned be personalized for individual customers?</p>
Resource Utilization	<p>A good process should capitalize on the human skills present among its participants. For instance, people are often capable of more than is expected of them. Alternatively, people may perform badly simply because they are unsuited to the Roles they are playing.</p>	<p>Do process participants regularly offer useful advice to those in different Roles? Are people dealing with their work too easily, to the point where they seem not to be putting much into it? Are people having continually to consult others about details of the work they are personally charged with?</p>
Empowerment	<p>It is a truism that people perform better, and get on better with their colleagues, if they enjoy their work and feel appreciated. Hence, processes should be designed so that participation is not unduly stressful, and by itself acts to foster increased job satisfaction. A large part of this is the sense that you are learning something as you work, not just repeating the same mundane tasks days after day.</p>	<p>Are tasks carried out in good time, or generally left until the last minute? Are deadlines slipped on a regular basis? Do users find themselves working overtime, and if so, is it because they choose to or because they have to? Are interactions among colleagues strained, and tempers frayed? Do users demonstrate increased competence over time as they participate in a particular type of process?</p>
Embodiment of values	<p>Increasingly people are recognizing that corporate life should represent—even exemplify—the same beliefs and values that are held up by society in general. Not only is this mandated by regulation in various ways (with respect to the environment, wage laws, child exploitation, and so on) but workers and management at all levels need to know that the organization to which they devote the best part of their waking hours is acting a manner they consider responsible, and can be proud of.</p>	<p>Is a process designed to make good use of natural resources—avoiding pollution, recycling waste products, and so on? Do people working in a process have to cover up aspects of their work in order to comply with company policies or government regulations? Is the balance of recompense in a process fair—in particular, is undue favoritism shown to workers in a particular location, or level of the organization? Are there ways in which the process contributes positively to the communities in which it is carried out?</p>

The metrics given above are quite different from those conventionally used to measure processes. However, they are no less important.

It is often the case that these aspects of process—those focused on human involvement—are handled better in small organizations than large ones. This is because people know intuitively that they should pay attention to human issues—and when direct control over the entire workplace is available attention can be paid to them relatively easily. However, as organizations grow in size, other issues start to predominate.

For this reason, people who were part of a large company when it was still a small one often bemoan the loss of a culture that they valued. They may declare that as a result their job satisfaction has changed in inverse proportion to their financial status, and say they are only hanging on until they have gained enough stock options to get out.

This benefits no one. Everyone gains more from a job to which they can give their all, wholeheartedly—and the organization gains most of all. Moreover, it *is* possible for large organizations to maintain a personal approach and values more typical of small organizations. They just need a new approach to quality.

The metrics and indicators described above can be applied to any human-driven business process, and specialized software is not mandatory in order to do so. Although software support might make measurement easier, it can be implemented as a *second phase* of the measurement activity—the *first phase* being to determine the processes concerned and model them in such a way that the metrics can be applied. This approach to process modeling must be focused on the innovative, interactive human activity at the heart of such processes—which means applying the principles and techniques of **Human Interaction Management** (HIM)—information on which can be found at www.rolemodellers.com/abstracts.

Organizations who wish to keep the hearts and minds of their staff, and make best use of their skills and abilities, now have a simple way forward. First use HIM to capture the processes which constitute the work of their people, and then ensure that their people are helped to work better—both for their own good and for the good of the organization who employs them.

Keith Harrison-Broninski is CTO of Role Modellers Ltd (<http://www.rolemodellers.com>), author of “Human Interactions” (<http://www.mkpress.com/bi>), and contributing author to the new BPMG book “In Search Of BPM Excellence” (http://www.bpmg.org/insearch_book.php)

ⁱ <http://www.ge.com/sixsigma/sixsigstrategy.html>

ⁱⁱ Hammer, M., Champy, J., 1993, “Reengineering the Corporation: A Manifesto for Business Revolution,” HarperCollinsBusiness

Hammer, M., 1996, "Beyond Reengineering," HarperCollinsBusiness

ⁱⁱⁱ Intangibles are at the heart of all human activity, especially socio-economic activity. A number of intangible accounting approaches have been proposed to explain, measure, and manage intangible assets. Intangibles, like other assets, are increased and leveraged through deliberate actions. Among these efforts, one finds the intellectual capital methods of Karl-Erik Sveiby, Leif Edvinsson, Johan and Goran Roos, and Annie Brooking, and Pat Sullivan. Related work from the U.S. is the Balanced Scorecard approach of Norton and Kaplan. There are also a number of other experiments such as Kanavsky and Housel's system for calculating knowledge valued added, a variation of economic value added or EVA.

Recent important work in this area includes the Brookings Institution project in intangible assets spearheaded by Baruch Lev of New York University and Steve Wallman, former Commissioner of the American Securities and Exchange Commission. Virtually every accounting standards body in the U.S. and Canada has special task forces on accounting for intangibles, and the OECD in Europe has also held special hearings. Typical categories of intangible assets include business relationships, human competence, internal structure, and social capital or culture and values.

Other intangibles are being addressed through indicators regarding social responsibility and sustainable business practices. There are a growing number of assessment tools such as the Deloitte & Touche Corporate Environmental Report Score Card, and the Future 500 Performance Tool Kit. One of the most telling examples is the recent shift of focus for Shell. Since 1998, the annual Shell Report for Royal Dutch/Shell Group has emphasized their efforts to support the "triple bottom line." Shell defines this as "integrating the economic, social and environmental aspects of everything we do and balancing short-term wants with long-term needs."

These are serious attempts to develop new indexes, equations, measures, and analytical approaches for calculating knowledge assets and for understanding intangible value creation. All this adds up to a serious attack on traditional accounting and enterprise models that regard only revenue and physical assets as "valuable," and that regard people as liabilities rather than important resources and investments.

Verna Allee, 2002, "A Value Network Approach for Modeling and Measuring Intangibles,"

<http://www.vernaallee.com/library%20articles/A%20ValueNetApproach%20white%20paper.pdf>

^{iv} "Introducing Excellence," EFQM, available from <http://www.efqm.org/>, p.5

^v <http://www.sei.cmu.edu/cmml/>

^{vi} EFQM, *ibid.*, p.14

^{vii} The author would like to acknowledge the value of the feedback on this topic provided by participants in an Open Space gathering held at the British Standards Institution on 30 September 2003 to discuss the ISO 9000 standard, which involved members of TC176 (the group responsible for writing ISO 9000), a range of managers (both quality management and line management), consultants, trainers, auditors, certifiers, accreditors, standards writers and members of learned bodies. The event was organized by the Business Improvement Network (<http://www.bin.co.uk>).